

# *Research Accomplishments*

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# ENVIRONMENTAL MANAGEMENT SCIENCE PROGRAM

**FY2000 Mid-Year Summary**

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**U.S. Department of Energy  
Office of Environmental Management  
Office of Science**



**COVER GRAPHIC:** Front view of a 4" wide thermospheric-pressure plasma source operating with 750 Torr helium and 10 Torr oxygen. [see Project #54914]

## ***TABLE OF CONTENTS***

Collaborations.....	5
Student Research .....	37
Communication Products .....	59
Research Transfers .....	183
Topical Workshops .....	197
News Releases .....	215
Fact Sheets .....	239
Success Posters .....	335

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## **RESEARCH ACCOMPLISHMENTS FOR THE ENVIRONMENTAL MANAGEMENT SCIENCE PROGRAM**

### **Introduction**

The intent of this document is to provide information concerning the research transition activities of the Environmental Management Science Program (EMSP). Research transitions are measures of how successfully the program has transitioned knowledge gained from research projects to other areas. These measures may be in the form of actual transfers of new knowledge or data gained through research products or processes to other areas within EM, such as Focus Areas and Crosscutting Programs, or may be more general knowledge transfer measures found in similar research programs, such as collaborations, numbers of student researchers, peer reviewed papers and presentations (communication products), or consultations.

The information contained in this document has been gathered from various sources, such as interactions with EMSP staff, proceedings from EMSP workshops and technical conferences, principal investigators, the Project Tracking System, EMSP Project Annual Reports, and literature searches. The information presented is an attempt to capture research transition activities and therefore should not be considered to be a complete or accurate listing. This volume contains the best available data as of March 30, 2000. Where incomplete information was received, efforts are underway to rectify this situation, as well as verify information accuracy.

### **Document Layout**

Research transition activities are addressed in four categories: collaborations, student research, communication products, and research transfers. In addition, there are sections covering topical workshops, news articles, and fact sheets. The research transition activities are listed by project and include project number, title, and the name of the principal investigator.

1. *Collaborations.* This section reports the collaborative effort being undertaken by EMSP projects to further research and to transfer research towards technical maturity. 88 collaborations have been reported. These are further categorized by type of collaboration, as follows:

<b>Type of Collaboration</b>	<b>Number of each type</b>
Consulting - provide advice or technical expertise	40
Joint interaction - researcher/end-user in joint interaction	8
Mission directed - project direction provided by end-user	13
Program interaction - researcher to researcher interaction	26
Unclassified	1

2. *Graduate Students.* One of the two main objectives of the EMSP is to develop a cadre of environmental scientists to meet 21st century clean-up needs. This

section tracks the impact the EMSP is having on increasing the cadre of environmental researchers. The number of Post Doctoral, PhD, Masters, and Undergraduate students are reported by EMSP project. Graduate student researcher's names are noted where provided. As of March 30, 2000, 528 undergraduate, graduate, and post graduate researchers were funded under this program.

3. *Publications and Presentations.* This section provides a list of publications by EMSP project. Journal articles, papers, reports, presentations, posters, and media reports are considered publications for the purposes of this summary. The following table lists the totals for each of these categories.

Type of Publication/Presentation	Number of each type
Journal Articles	358
Other (Encyclopedias, manuscripts)	33
Papers	46
Patent disclosures and applications	11
Posters	19
Presentations	424
Press Releases	6
Proceeding Contributions	103
Reports	35
Theses/Dissertations	20
Submitted for Consideration	115

4. *Research Transfers.* The main objective of EMSP-funded research is to address EM clean-up needs through 2070. This section includes research transfers (i.e., deployments, products, spin-off business, field tests, continuation by others, etc.) by project. Some activities listed in this section may be planned actions and are provided to ensure follow-up contacts are made.

Type of Research Transfer	Number for each type
Commercializations	9
Deployments	1
Field Tests	12
Focus Areas & Crosscutting Programs	4
Processes	2



